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RECURRENCE OF BENIGN OSTEOBLASTOMA OF THE MANDIBLE AND WITH A 4-YEAR-FOLLOW-UP: A CASE REPORT

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ABSTRACT

Benign osteoblastoma is a rarely seen tumor of the facial bones, especially the mandible. In this report, a 14-year-old boy with a tumor of the mandible was presented. The histopathological diagnosis was osteoblastoma. 18 months after the first surgery, recurrence was seen in the same area. A second surgery was performed. After 48 months from the first surgery, healing was uneventful. It should be noted that while osteoblastomas of the mandible are rare, their recurrence is even more rare. Thus, our experience with this case leads us to suggest that follow-up be mandatory for the treatment of osteoblastomas.

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MANDİBULADA BENİGN OSTEOBLASTOMANIN NÜKSETMESİ VE 4 YILLIK TAKİP: BİR VAKA RAPORU

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ÖZET

Benign osteoblastoma, fasiyal kemiklerde, özellikle de mandibulada nadir görülen bir tümördür. Bu raporda, 14 yaşında bir erkek hastada görülen mandibula tümörü sunulmuştur. Histopatolojik teşhis osteoblastoma olarak bildirilmiştir. Cerrahiden 18 ay sonra aynı bölgede tümörün nüksettiği görülmüştür. İkinci bir cerrahi uygulanmıştır. İlk cerrahiden 48 ay sonra iyileşmenin problemsiz olduğu görülmüştür. Mandibuler bölgede osteoblastomanın nadir görülmesine ek olarak, nükslerinin daha da nadir olması kayda değerdir. Bu nedenle, bu olgudan elde edilen tecrübeyle, osteoblastoma tedavisinden sonra takibin zorunlu olması önerilebilir.

Sorumlu Yazar
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INTRODUCTION

Benign osteoblastoma is a rarely seen tumor of bone, representing less than 1% of all primary bone tumors. The skull and jaw bones constitute only about 15% of the total (osteoblastoma) cases.[1] A slight mandibular predilection is observed in such cases.

Another clinical presentation is tender swelling associated with buccal and/or lingual cortical bone expansion, in which affected teeth are usually vital.

Most cases of osteoblastoma are treated by en bloc resection, local excision and vigorous curettage. The prognosis is good, but malignant transformation is a rare complication. [2]

Given the abovementioned studies, this case study aims to present a mandibular osteoblastoma and the recurrence of the lesion.

CASE REPORT

A 14 -year-old male patient was referred to our clinic with a chief complaint of dull pain in the right mandibular first molar region that had been present for the past two months.

There was no cortical expansion around the tooth number 46 and oral mucosa was healthy. According to electric pulp test tooth number 46 was vital. There was no history of previous facial trauma or contributory medical factors.

Panoramic radiograph (Figure 1) showed poorly defined, mixed opaque-lucent process around the roots of tooth number 46 with alternating zones of sclerosis and radiolucency. Resorption of the roots was remarkable.

Initial diagnosis was cemento-osseous dysplasia. Excisional biopsy was performed under local anesthesia. Curettage material showed noncapsulated, fragile connective tissue-like nature of the lesion including bony segments. Curettage of the surrounding bone was done easily. Teeth number 45 and 46 were extracted because of their close relation with the lesion. Histopathologic examination revealed a well vascularized fibrous connective tissue stroma containing osteoid and bone trabeculae. The trabeculae were rimmed by plump osteoblasts (Figure 2). The final diagnosis was osteoblastoma.

Following uneventful postoperative healing, the patient had periodic clinical-radiographic follow-ups and remained free of disease for 6 months after the surgery. The patient was called for another routine control 12 months later. During the post-operative eighteen month follow-up, he had no pain and discomfort. A panoramic film was taken and mixed stage was observed at the same area (Figure 3). Another surgery was performed under local anesthesia and wide curettage was done. Noncapsulated, fragile, connective-tissue-like nature of the lesion including bony segments was observed again. Post-operative healing was uneventful. The patient was called for control every 6 months.

No recurrent lesion was encountered in clinical-radiographic follow-ups and the site remained lesion-free for 48 months after the first surgery.

DISCUSSION

In 1956, Jaffe and Lichtenstein chose the term benign osteoblastoma for this neoplasm and detailed the clinical and histopathologic features.[3, 4] Jones et al.[5] reported that osteoblastomas of the jaws occur predominantly on the left side of the posterior mandible and is associated with pain, tenderness, and discomfort.



Figure 1. Panoramic radiograph showing poorly defined, mixed process around the roots of tooth number 46 with alternating zones of sclerosis and radiolucency

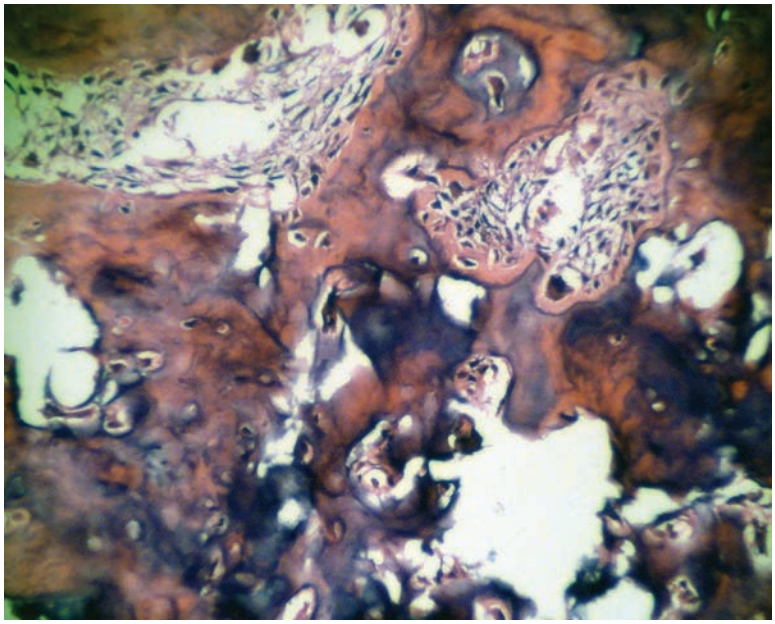


Figure 2. Histopathologic view



Figure 3. Panoramic rediograph after the recurrence showing mixed stage

Radiographic findings vary widely and are largely dependent upon the degree of calcification. Generally, osteoblastomas of the jaw have well- or ill-defined borders and may have a completely radiolucent appearance, may be mixed in appearance, or may appear completely radiopaque.[5] In this case radiographic examination showed poorly defined, mixed opaque-lucent lesion with root resorption around the apices of tooth number 46.

Histologically, most osteoblastomas show the formation of abundant osteoid and immature woven bone trabeculae, with large number of osteoblasts and osteoclasts.[6]

Differential diagnosis of osteoblastoma should include cementoblastoma, ossifying fibroma, cemento-osseous dysplasia, osteoid sarcoma and osteoid osteoma.[7]

In this case according to clinical and radiographic findings initial diagnosis was cemento-ossous dysplasia. In the histopathologic examination, the presence of plump osteoblasts was remarkable. Thus, as plump osteoblasts are not generally encountered components of cemento-osseous dysplasia unlike osteblastoma, the final diagnosis was osteoblastoma.

Surgical curettage is the treatment of choice for most of the osteoblastomas.[8] Gordon et al.[9] identified a recurrence rate of approximately 14% in a review of 59 cases.

In this case recurrence was encountered after 18 months from the first surgery. A wider curettage was performed.

No recurrence was observed following the second surgical intervention. Aggressive curettage of the tooth bearing areas may be curative and could be considered for the preservation of oral function.

In conclusion, osteoblastomas are rare neoplasms of jaw bones and offer a unique diagnostic challenge. Careful histopathological examination correlated with the clinical presentation and radiographic appearance is essential to arrive at an accurate diagnosis and a successful treatment protocol.

REFERENCES

1. Lypka MA, Goos RR, Yamashita DD, Melrose R. Aggressive osteoblastoma of the mandible. Int J Oral Maxillofac Surg 2008; 37: 675-678.

2. Rawal YB, Angiero F, Allen CM, Kalmar JR, Sedghizadeh PP, Steinhilber AM. Gnathic osteoblastoma: clinicopathologic review of seven cases with long-term follow-up. Oral Oncol 2006; 42: 123-130.

3. Jaffe HL. Benign osteoblastoma. Bull Hosp Joint Dis 1956; 17: 141-151.

4. Lichtenstein L. Benign osteoblastoma; a category of osteoid- and bone-forming tumors other than classical osteoid osteoma, which may be mistaken for giant-cell tumor or osteogenic sarcoma. Cancer 1956; 9: 1044-1052.

5. Jones AC, Prihoda TJ, Kacher JE, Odingo NA, Freedman PD. Osteoblastoma of the maxilla and mandible: a report of 24 cases, review of the literature, and discussion of its relationship to osteoid osteoma of the jaws. Oral Surg Oral Med Oral Pathol Oral Radiol Endod 2006; 102: 639-650.

6. Ramme AJ, Smucker JD. Balancing spinal stability and future mobility in the cervical spine: surgical treatment of a case of osteoblastoma with secondary aneurysmal bone cyst. Spine J 2011; 11: e5-12.

7. Matsuzaka K, Shimono M, Uchiyama T, Noma H, Inoue T. Lesions related to the formation of bone, cartilage or cementum arising in the oral area: a statistical study and review of the literature. Bull Tokyo Dent Coll 2002; 43:173-180.

8. Lucas DR. Osteoblastoma. Arch Pathol Lab Med 2010; 134: 1460-1466.

9. Gordon SC, MacIntosh RB, Wesley RK. A review of osteoblastoma and case report of metachronous osteoblastoma and unicystic ameloblastoma. Oral Surg Oral Med Oral Pathol Oral Radiol Endod 2001; 91: 570-575.